

## Cerambycidae.

## LEPTURINÆ.

*Sagridola quinquemaculata*, sp. nov.

*S. nigra*, elytris obscure fuscis; fronte, thorace lineis tribus, scutello, elytris maculis quatuor flavis. Long.  $6\frac{1}{2}$  lin.

Head black, with a broad longitudinal line in the middle and a narrow line on each side of it bright yellow; eyes prominent. Thorax scarcely longer than broad, slightly narrowed in front and constricted behind the middle, velvety black, with a broad sutural line and a broad stripe on each side bright yellow. Scutellum yellow. Elytra scarcely twice the length of the head and thorax taken together, broad at the base, much attenuated towards the apex, which is truncate, flat, the margins towards the apex slightly reflexed; shoulders at the sides somewhat thickly and strongly punctured; their colour is fuscous, with a large ovate spot in the middle of each, and the apex yellow. Antennæ slender. Legs and underside of the body pitchy black, with pale yellow markings on the epimera, parapleura, and the sides of the abdominal segment.

*Hab.* Madagascar. B.M.

LII.—*A List of the Gasteropoda collected in Japanese Seas by Commander H. C. St. John, R.N.* By EDGAR A. SMITH, F.Z.S., Zoological Department, British Museum.

ALL the specimens which represent the species included in the following list were liberally presented to the National Collection by Mr. J. Gwyn Jeffreys. Certain species dredged at the same time, and stated by Mr. Jeffreys (*Journal Linn. Soc., Zoology*, vol. xii. pp. 100–107) to be identical with, or but varieties of, European forms, will not now be enumerated, as they have not as yet come under my observation. Before commencing the list, I would add that the shells have been most admirably collected by Commander St. John, to whom the greatest praise and thanks are due. The care bestowed in preserving the exact localities, the depth at which they were dredged, at times even the temperature of the water, and also the nature of the sea-bottom, indicates a vast amount of labour and energy, which it would be well if more frequently imitated, as such information always greatly adds to the interest of the subject, and facilitates and adds security to the determination of species. In a future communication I propose to give a list of the Conchifera.

## GASTEROPODA.

1. *Terebra Adamsii*, Smith, Ann. & Mag. Nat. Hist. 1873, xi. p. 264.

*Hab.* Matoza Harbour, 6 fathoms, sand, long.  $136^{\circ} 55'$  E., lat.  $34^{\circ} 23'$  N.

2. *Terebra japonica*, Smith, *l. c.* p. 265.

*Hab.* Matoza Harbour, 6 fathoms, sand; and Goza Harbour, lat.  $34^{\circ} 18'$  N., long.  $136^{\circ} 45'$  E., 6 fathoms, sandy mud.

3. *Terebra evoluta*, Deshayes; Conchol. Icon. xii. f. 55.

*Hab.* Matoza Harbour, 6 fathoms, sand.

The figure above referred to represents an unusually large example, the average dimensions being but two thirds that size.

4. *Terebra albozonata*\*, sp. nov.

*Hab.* Matoza Harbour, 6 fathoms, sand.

This species is of a pale brown colour, with a narrow white zone above the suture, and also one around the periphery; it is furnished with numerous oblique ribs, which are cut across by a fine infrasutural furrow.

5. *Terebra melanacme*, sp. nov.

*Hab.* Cape Sima, 18 fathoms, sand and broken shells.

A smooth species, of a pale brown colour, with a white infrasutural zone dotted with chestnut, a plain white band round the periphery, and the apex stained with purplish black.

6. *Terebra (Myurella) bathyrhaphe*, sp. nov.

*Hab.* Gulf of Yedo, 6 to 25 fathoms, bottom soft mud and sand.

This is a strongly sculptured species, with longitudinal ribs nodose at their extremities; the suture is well defined, and the general colour is a dusky brown.

7. *Terebra (Myurella) polygyrata*, Deshayes; Conchol. Icon. xii. sp. 146.

*Hab.* Goza Harbour, 6 fathoms, bottom sandy mud.

\* Full descriptions of the new species of Terebridæ mentioned in this paper will be given elsewhere.

8. *Pleurotoma crispa*, Lamarek; Conchol. Icon. i. f. 11 a, b.

*Hab.* Ooshima Harbour, 8 fathoms, bottom sandy mud and shelly.

9. *Pleurotoma leucotropis*, Adams & Reeve, Voy. Samarang, p. 40, pl. x. f. 7.

*Hab.* Matoza Harbour, 6 fathoms, sand; and Ooshima Harbour, 8 fathoms, sandy mud and shelly.

10. *Pleurotoma vertebrata*, sp. nov.

Testa elongato-subfusiformis, alba, maculis fuscis variegata, versus apicem dilute violacea; anfract. 10, primi 3 convexi, vitrei, politi, sequentes 6 tricarinati (carina mediana maxima), inter carinas lira unica spirali, gracili, liris longitudinalibus numerosissimis concinno decussata (lira superiore ad locos intersectionis nodosa) ornati; anfr. ultimus inferne contractus, ad 14-carinatus (carina paululum peripheriam supra maxima); apertura parva, longitudinalis testæ  $\frac{1}{3}$  vix superans, intus sulcata, suleis costis externis respondentibus; labrum tenue, margine crenulatum; incisura lata, haud profunda, supra carinam maximam sita; columella leviter obliqua, medio obsolete uniplicata; cauda parva, alba; canalis perbrevis, latus, leviter recurvus.

Long. 16 mill., diam.  $5\frac{1}{3}$ .

*Hab.* Persian Gulf (*Colonel Pelly*); Matoza Harbour, 6 fathoms, sand (*St. John*).

The above name is applied to this lovely species because the fine nodose liration which encircles the whorls just above the large central keel is crossed by slender thread-like lines, diverging like the processes from a herring's backbone. The other fine lirations are regularly oblique. The prominent central keel and style of colouring at once distinguish this form.

11. *Pleurotoma* (—?\*) *Sancti-Ioannis*, sp. nov.

Testa fusiformis, sub epidermide fugaci olivacea pallide fuscescens; anfract. 10 convexiusculi, striis spiralibus tenuissimis subconfertis (in anfr. ultimo infra peripheriam majoribus) incrementique lineis flexuosis insculpti; apertura rufescenti-fusca, ovata, inferne contracta, canalem latum, breviusculum obliquum formans, circiter longitudinis totius  $\frac{2}{5}$  æquans; labrum tenue paululum supra medium late sinuatum; columella tortuosa, longitudinaliter scalpta; operculum unguiforme.

Long. 40 mill., diam. 14.

*Hab.* About 100 miles south-east of Yesso, 48 fathoms, sand and stones.

I feel much pleasure in dedicating this fine and very distinct

\* The subgenera of *Pleurotomidæ* will be given in a future paper.

species to Commander H. C. St. John, by whom it was discovered. The subconvex simple whorls, clothed with a smooth, thickish, olive epidermis, the wide sinuation of the lip, and the broad oblique canal are the principal characteristics.

12. *Pleurotoma (Drillia) flavidula*, Lamk. ; Con. Icon. i. *Pleurotoma*, f. 66 ; Kiener, Coq. Viv. *Pleurotoma*, pl. vi. f. 2.

*Hab.* North of Nippon, 43 fathoms, sand and mud ; west of Nippon, 3 fathoms, soft mud ; Goza Harbour, 6 fathoms, sand and mud.

13. *Drillia Jeffreysii*, sp. nov.

Testa fusiformis, subturrita, luteo-albida, purpureo-fusco maculata et punctata ; anfract. 13 superne concavi, inferne convexi, costis obliquis infra excavationem (in anfr. ultimo 14-15 ad peripheriam obsoletis) instructi, transversim ubique striati et graciliter lirati, liris 2-3 supra costas albidis, subnodosis, incrementique lincis flexuosis ornati ; apertura intus fuscescens, purpureo tineta, longitudinis testæ haud  $\frac{2}{3}$  æquans ; labrum medio extans, superne valde profundeque sinuatum ; canalis latus, brevis.

Long. 37 mill., diam. 11.

*Hab.* Goza Harbour, 3-43 fathoms.

The nearest allied species to the present one is *flavidula*, Lamarek, from which it differs in having a shorter aperture, a broader canal, and distinct spiral striation in the concavity which occupies nearly the upper half of the whorls.

14. *Pleurotoma (Drillia) chocolata*, sp. nov.

Testa fusiformis, nitens, saturate purpureo-fusca, zonis angustis tribus modo supra costas parentibus ornata ; anfr. 12, primi 2-3 convexi, læves, cæteri superne concavi, deinde convexiusculi, infra excavationem costis rotundatis paucis (in anfr. ultimo 9 ad peripheriam obsoletis) instructi, striis exilibus paucis spiralibus, sed haud in concavitate, inculpti ; anfr. ultimus infra peripheriam valde angustatus, ubique transversim striatus vel liratus ; apertura intus purpureo-fusca, longitudinis testæ ad  $\frac{2}{3}$  æquans ; labrum tenue, medio extans ; sinus mediocriter profundus ; canalis obliquus, recurvus.

Long. 21 mill., diam. 7.

*Hab.* Goza Harbour, 6 fathoms.

The dark chocolate colour, with the three yellowish spots (which are slightly nodulous) on each rib, and the smooth concavity at the upper part of the whorls are very distinctive characters.

15. *Pleurotoma* (—?) *inconstans*, sp. nov.

Testa oblonga, turrita, purpureo-fusca, circa anfractuum medium

nodulis flavicantibus ornata; anfract. 10-11 supra paululum excavati, medio angulati, superne ad suturam carina parva, pallida, subnodosa cincti, circa medium nodulorum flavicantium circiter 15 serie ornati, liris spiralibus ad 6 (inferioribus duabus infra nodulos sitis quam cæteris majoribus, tuberculisque parvis munitis) succincti; anfr. ultimus liris a nodulis descendentibus aliisque spiralibus concinne nodose clathratus; apertura fusca, intus lirata, longitudinis totius  $\frac{1}{3}$  paulo superans; canalis perbrevis, latus; sinus latus, supra nodulorum seriem situs.

Long. 13 mill., diam. 4.

*Hab.* Ooshima Harbour, 8 fathoms; Tsusima Strait, 9 fathoms; Matoza Harbour, 6 fathoms.

The lirations within the aperture are more distinct in some examples than in others.

#### 16. *Pleurotoma* (—?) *tuberosa*, sp. nov.

Testa elongata, fusiformis, turrata, albida, apice fuscescens, strigis fuscis inter costas variegata; anfr. 12, primi duo vitrei, politii, globulares, cæteri convexiusculi, infra suturam undosam carinatum leviter restricti et canaliculati, infra canalem costis crassis subobliquis (in anfr. superioribus nodulosis) (una hic illic quam cæteris majore tuberosa et fusca) instructi, spiraliter præcipue inter costas striati; anfr. ultimus circa peripheriam albo zonatus, costis ad 10 versus basim obsoletis, una post labrum maxima, fusca; apertura parva, alba, zonis duabus interruptis macularum externarum intus variegata, longitudinis totius  $\frac{1}{3}$  æquans; columella callo crassiusculo amicta, ad suturam tuberculata; canalis brevis, recurvus; labrum medio prominens superne valde sinuatum. Long. 22 mill., diam. 7.

*Hab.* Ooshima Harbour, 8 fathoms; Matoza Harbour, 6 fathoms; Goza Harbour, 6 fathoms.

This species possesses the general aspect of *varicosa*, Reeve; it is, however, distinct. The brown swellings or varices (in *varicosa* white), the brown apex, small aperture, and white band around the periphery easily separate this form.

#### 17. *Pleurotoma* (—?) *erosa*, Schrenck:

*Pleurotoma* (*Clavatula*) *erosa*, Schrenck, Reisen u. Forsch. im Amurlande, pl. 17. f. 5-7.

*Hab.* Nemero, East Yesso, 3 to 4 fathoms; off Cape Blunt, 35 fathoms; Yamada Harbour, 7 fathoms; east of Nippon, lat. 34° 6' N., long. 136° 15' E., 11 fathoms.

Shell shortly fusiform, purplish brown, varying from half an inch to an inch in length. The whorls are angled at the middle, longitudinally plicated and transversely sulcated. The aperture is purplish brown, the notch of the labrum very slight, and the canal very short.

18. *Pleurotoma* (—?) *patruelis*, sp. nov.

Testa elongata, fusiformis, turrata, rubro-fusca, circa anfractuum medium albo zonata; anfr. ultimus paululum infra medium zona alba secunda ornatus; anfr.  $12\frac{1}{2}$  medio angulati, longitudinaliter flexuose obsolete plicati, plicis superne leviter nodulosis, medio nodulis majoribus et inferne nodulis duobus aliis minoribus munitis, filis spiralibus 10–12 tenuibus (iis nodulos conjungentibus quam cæteris crassioribus) succincti, et incrementi lineis striati; anfr. ultimus liris transversis circiter 24 succinctus; apertura longitudinis totius  $\frac{1}{3}$  adæquans; canalis brevis.

Long. 27 mill., diam.  $7\frac{1}{2}$ .

*Hab.* Lat.  $34^{\circ} 6' N.$ , long.  $136^{\circ} 15' E.$ , 11 fathoms.

This is a very pretty species, and belongs to the same group which includes *P. Metcalfei*, Angas, and some others.

19. *Bela iessoensis*, sp. nov.

Testa ovato-fusiformis, sordide albida; anfr. 6 convexi; primi 2 læves, cæteri plicis longitudinalibus subacutis (in anfr. ultimo 14 flexuosis, infra medium sensim evanescentibus) instructi, et striis confertis elevatis (una quam cæteris majore anfractuum medium succingente, in ultimo obsoleta) inter et supra costas ornati; apertura ovato-oblonga, subangusta, longitudine spiram æquans, intus fuscescens; columella lævis, alba, vix tortuosa; labrum tenue, superne leviter sinuatum; canalis brevissimus, latiusculus, aliquanto recurvus.

Long. 15 mill., diam.  $6\frac{2}{3}$ .

*Hab.* South-east of Yesso, lat.  $42^{\circ} 58' N.$ , long.  $104^{\circ} 24' E.$ , at a depth of 43 fathoms; bottom, sand and mud.

This very beautiful species is well characterized by its convex whorls, which are neatly plicated longitudinally—and especially by the close and fine spiral liration with which the entire surface is ornamented, one lira larger than the rest encircling the middle of each whorl.

20. *Murex* (*Chicoreus*) *adustus*, Lank.; Conch. Icon. iii. f. 29; Kiener, Coq. Viv. pl. 33. f. 1.

*Murex despectus*, A. Ad. Proc. Zool. Soc. 1853, p. 72.

*Hab.* Ooshima.

Having carefully compared the type of *despectus* with specimens of Lamarck's species, I do not hesitate to place the former as a synonym; for I cannot trace any differences. Supposing the locality "West Indies," quoted by Mr. Adams, to be correct, then this is a remarkable instance of wide geographical range.

21. *Murex* (*Phyllonotus*) *acanthophorus*, A. Ad.  
Proc. Zool. Soc. 1862, p. 272.

*Hab.* Hakodadi, 5 fathoms.

The dimensions of this species, which are not given by the author, are, length 43 mill., diam. 25; aperture oval, purplish within, 11 mill. long,  $6\frac{1}{2}$  broad. Both the length and breadth of the shell will vary considerably according to the extent of the closed canal and the longitudinal varices; but the size of the aperture is more constant.

22. *Murex* (*Cerastoma*) *endermonis*, sp. nov.

Testa ovata, spira turrata, fuscescens; anfractus 6 superne decliviter tabulati, paululum supra medium angulati, infra angulum convexiusculi, varicibus 7 laciniatis superneque uncinatis instructi, iris spiralibus inæqualibus scabrosis cincti; regio umbilicalis valde perforata; apertura ovata, intus fusco-purpurea; labrum varice ultimo fimbriato incrassatum, intus denticulatum, margine serratum, versus basim dente magno prominenti munitum; columella cæruleo-alba, medio fusco-purpureo maculata; canalis clausus, breviusculus, leviter recurvus.

Long. 33 mill., diam. 14.

*Hab.* Endermo Harbour, Yesso, 4 to 7 fathoms, sandy mud.

Some of the spiral lirations, that at the angle of the whorls and three or four others in the last whorl, are much larger than the rest, and with the varices produce a coarsely cancellated aspect. The base of the prominent tooth is purple-brown, and the point white.

*Murex talienwhanensis*, Crosse, and *M. inornatus*, Récluz, are allies of this species; but both lack the labral tooth.

It is only in young specimens that the varices are produced upward in a somewhat hooked manner; in the adult state the extremities are generally worn off.

23. *Murex* (*Cerastoma*) *Burnetti*, Adams & Reeve, Voy. Samarang, p. 38, pl. viii. f. 4, a, b.

*Hab.* Endermo Harbour, Yesso, 4 to 7 fathoms; bottom sandy mud.

This species, which was founded upon a specimen in very bad condition now in the Museum collection, is allied to *C. foliatum*, Gmelin, from Sitka, Vancouver, and other localities on the west coast of North America.

The specimens dredged by Captain St. John at the above locality are in good condition.

The spiral ribs, which are not so prominent on the whorls as in *C. foliatum*, become very large towards the foliaceous varices, on which they are produced, thus giving them a very strongly digitated aspect. On two adjacent ribs of the whorls halfway between the varices there are distinct protuberances, which are not to be traced in Gmelin's species. The labral tooth is very strong and large, and excavated on the side towards the aperture, which is of a purplish red colour crossed by whitish stripes running down from the digitations which arm the edge of the labrum within the aperture. It is to be remarked that all the specimens of *C. foliatus* which I have examined have the labral tooth smaller and *convex* on the inner side, and not excavated as in *M. Burnettii*. The latter is of a pale fawn-colour varied with numerous whitish undulating streaks.

*C. coreanicum*, A. Adams, Proc. Zool. Soc. 1853, p. 72, is an allied species, but of smaller growth, about 2 inches in length; it possesses the same kind of labral tooth.

#### 24. *Trophon lamellosus*, Gray.

*Fusus lamellosus*, Gray, Zoology of Bechey's Voyage, p. 118, pl. 36. f. 13.

*Hab.* Lat. 42° 58' N., long. 145° 24' E., 48 fathoms, sand and stones.

#### 25. *Euthria viridula*, Dunker.

*Fusus viridulus*, Dkr. Moll. Japonica, p. 3, pl. 1. f. 16.

*Euthria viridula*, Dkr., Lischke, Japan. Meeres-Conch. p. 39, pl. 5. f. 5, 6.

*Hab.* Japan, lat. 41° 12' N., long. 140° 45' E., 43 fathoms.

In the specimens I have examined, the lirations within the aperture are only nine in number, whereas Dunker mentions the existence of twelve.

#### 26. *Euthria fuscolabiata*, sp. nov.

Testa fusiformis, saturate purpureo-fusca; anfractus 8-9, primi duo læves, cæteri convexi, plicis longitudinalibus circiter 12 (in anfr. ultimo prope medium obsoletis) instructi, sutura undulata sejuncti, transversim liris spiralibus tenuibus (quarum paucæ quam cæteris crassiores sunt) ubique cincti, et incrementi lineis distincte striati; apertura longitudinis totius  $\frac{1}{2}$  adæquans, superne ovata, infra in canalem obliquum, aliquanto elongatum et recurvum producta, intus albida, liris intrantibus ad 12 labri marginem haud attingentibus munita; labrum tenue, intus saturate fuscum; columella medio arcuata, basi obliqua, fusca, tenuiter callosa; cauda obsolete rimata; operculum elongate ovatum, nucleo apicali.

Long. 29 mill., diam.  $10\frac{1}{2}$ ; apertura long. 15, diam.  $5\frac{1}{2}$ .



*Hab.* Off Cape Blunt, lat.  $41^{\circ} 41' N.$ , long.  $141^{\circ} 0' E.$ , at a depth of 35 fathoms.

On the upper volutions four or five of the spiral lirations are considerably thicker than the rest, and on crossing the longitudinal plications are faintly nodulous. On all the five examples of this species there is what appears to be a luteous deposit; but this may be the vestige of an epidermis. The lines of growth are very distinct, and on crossing the spiral lirations make them somewhat scabrous.

27. *Fusus (Sipho?) manchuricus*, sp. nov.

*Fusus manchuricus*, A. Adams, MS.

Testa ovato-fusiformis, sub epidermide luteo-olivacea rufescens; anfractus 8 convexiusculi, plicis longitudinalibus arcuatis circiter 12 (in anfr. ultimo ad medium evanidis) instructi, ubique lineis impressis supra costas continuis, in anfr. superioribus 8-10, in ultimo 20-25 ornati; apertura superne aliquanto ovata, versus basim in canalem latiusculum, perobliquum et recurvum producta, intus rufescens, longitudinis totius  $\frac{1}{2}$  æquans; columella valde tortuosa, superne rufescens basique alba; labrum tenue; operculum ovatum, nucleo vix terminali.

Long. 27 mill., diam. 11; apertura long.  $13\frac{1}{2}$ , diam. fere 5.

*Hab.* Lat.  $42^{\circ} 58' N.$ , long.  $145^{\circ} 24' E.$ , 48 fathoms, sand and mud.

This species is entirely clothed with a yellowish olive epidermis, beneath which the shell appears to be of a reddish colour. The plications or ribs are a trifle narrower than the interstices between them. The above name is attached to some specimens in the Cuningian collection; but I have been unable to find in what work Mr. Adams has given the description.

28. *Columbella tenuis*, Gaskoin.

*Hab.* Endermo Harbour, 4 to 7 fathoms, sandy mud.

The specimens which are associated with the above name have been compared with Gaskoin's type, which is in the collection of the late Mr. T. Lombe Taylor.

29. *Nassa marginulata*, Lamk.; Con. Icon. viii. f. 43; Kiener, Coq. Viv. pl. 29. f. 117.

*Hab.* Ooshima Harbour, 8 fathoms. Var. from Yamada Harbour.

30. *Nassa gemmulata*, Lamk.; Con. Icon. viii. f. 29; Kiener, Coq. Viv. pl. 22. f. 84 (*Buccinum*).

*Hab.* Gozo Harbour, 6 fathoms, sandy mud.

The operculum of this species has the outer edge, or that towards the labrum, prettily serrated. The Red Sea, Philippine Islands, New Guinea, and Queensland, Australia, are other localities of this species.

31. *Nassa stigmaria*, A. Ad.; Conch. Icon. viii. f. 42.

*Hab.* Ooshima Harbour, 8 fathoms.

32. *Nassa spurca*, Gould, Otia Conch. p. 129.

*Hab.* Ooshima Harbour, 8 fathoms, and Yamada Harbour, 7 fathoms.

33. *Nassa balteata*?, Lischke, Japan. Meeres-Conch. p. 61, pl. v. f. 10, 11.

*Hab.* East Nippon, 11 fathoms.

A single specimen, which may be a variety of this species, differs in having a more acute spire, consisting of nine whorls, and below the suture numerous narrow oblique brown lines flowing from the brown spots which border the whorls.

34. *Nassa tenuis*, sp. nov.

Testa elongata, tenuis, lutescenti-alba, ad suturas et circa medium propeque basim anfr. ultimi pallide rubro fasciata; anfractus 8, primi duo læves, politi, cæteri convexiusculi, costis tenuibus 18-20 et liris spiralibus circiter 6 granulose clathrati, anfr. ultimus liris spiralibus 16-17 (inferioribus 5-6 circa caudam haud granulatis) cinctus; apertura parva, ovata, longitudinis totius  $\frac{1}{3}$  paulo superans; columella leviter corrugata callo tenui induta, superneque tuberculo parvo munita; canalis obliquus, brevis, recurvus; labrum incrassatum, intus denticulis circa 10 ornatum, medio basiue rufo maculatum.

Long. 12 mill., diam. 5; apertura long.  $4\frac{1}{2}$ , diam.  $2\frac{1}{2}$ .

*Hab.* Cape Sima, 18 fathoms, sand and broken shells; Goza Harbour, lat.  $34^{\circ} 18' N.$ , long.  $136^{\circ} 45' E.$ , 6 fathoms, sandy mud; Ooshima Harbour, 8 fathoms, sandy mud and broken shells.

This is a very delicately sculptured species. The fine ribs and spiral lirations are very prettily and somewhat quadrately noduled at the points of intersection. One specimen is a little less elongate than the rest.

35. *Nassa fuscolineata*, sp. nov.

Testa brevis, pallide cornea, circa basim anfr. superiorum et medium anfr. ultimi linea fusca costis interrupta cincta; anfractus 8, primi tres læves, polito, cæteri convexiusculi, costis rotundatis 12

(in anfr. ultimo basi fere continuis) instructi, sulcis angustis circiter 6 (in ultimo ad 15) supra costas continuis insculpti, sutura undulata discreti; apertura parva, rotunde ovata; labrum incrassatum, medio basique fusco maculatum, intus liratum; canalis angustus, brevis, leviter recurvus; columella arcuata, levis, callo tenui induta.

Long.  $8\frac{1}{2}$  mill., diam.  $4\frac{1}{2}$ .

*Hab.* Cape Sima, 18 fathoms, bottom sand and broken shells.

Above the spiral interrupted brown line a white one adjacent to it is discernible; and on the body-whorl somewhat below the middle there are two other, very pale brownish lines interrupted by the ribs, which are a little broader than the interspaces.

36. *Purpura lapillus*, Linn.; Conch. Icon. iii. f. 47, *a*, *b*.

*Hab.* Japan.

The Japanese forms of this Protean shell are as varied as those on European shores. In some specimens the imbrications are prominent, as in Reeve's figure 47 *b*, but much more numerous, in some cases groups of six or eight being quite contiguous. In other examples the imbrications are nearly obsolete.

37. *Purpura alveolata*, Rve. Conch. Icon. iii. f. 60.

*Hab.* Ooshima.

Reeve gives "Panama, *Cuming*," as the locality of this species. It does not appear in Mr. A. Adams's list of Japanese *Purpurina*, given in the 'Annals,' 1870, vol. v. p. 422; and therefore probably it has not been recorded from so northern a locality. There are in the Museum collection other specimens from Formosa and Swan River.

38. *Sistrum tuberculatum*, Blainv.; Conch. Icon. iii. *Ricinula*, f. 11; Kiener, Coq. Viv. *Purpura*, pl. 5. f. 10, 10 *a*.

*Hab.* Toba and Ooshima, on the shore.

39. *Buccinum Jeffreysi*, sp. nov.

Testa ovato-fusiformis, alba, carinis rufo punctatis ornata, epidermide sordide olivaceo-alba longitudinaliter lamellosa amicta; anfractus  $6\frac{1}{2}$ . primi duo levés, rufescentes, globulares, cæteri convexi, liris vel carinis tenuibus 6-7 (in anfr. ultimo circa 20-24), una leviter undulata circa medium quam cæteris majore, cincti,

ubique lineis longitudinalibus tenuissimis elevatis confertis inter liras pulcherrime ornati; apertura alba, ovata, basi late breviterque canaliculata, longit. totius  $\frac{7}{15}$  adæquans; canalis recurvus; columella lævis, tenuiter callosa, alba; labrum incrassatum, aliquanto reflexum; operculum certe buccinoidale.

Long. 30 mill., diam.  $14\frac{1}{2}$ ; apertura long. 14 mill., diam.  $6\frac{1}{2}$ .

*Hab.* Lat.  $42^{\circ} 58' N.$ , long.  $145^{\circ} 24' E.$ , 48 fathoms, sand and stones.

This species may eventually prove but a large and fine variety of *B. japonica*, A. Adams; but at present I distinguish it with a separate name, since there are several differences which may be regarded as specific. The whorls are only slightly angulated in the middle by the keel which encircles them at that part; and this keel is undulated, a character not assigned to *B. japonica*; the red spotting on the keels is also absent in that species; and the colour of the epidermis is different. At the base of the cauda in the present species there is a largish excavation; but I am inclined to attribute it to a repaired injury.

40. *Volutharpa ampullacea*, Middendorff.

*Bulla ampullacea*, Midd. Sibirische Reise, Theil ii. pl. 8. f. 3 & 4.

*Hab.* Lat.  $41^{\circ} 12' N.$ , long.  $140^{\circ} 45' E.$ , at a depth of 43 fathoms, bottom sand and mud.

41. *Mitra (Costellaria) suluensis*, Ad. & Rvc.

*Mitra suluensis*, Ad. & Rvc. Voy. Samarang, pl. 10. f. 27.

*Hab.* Ooshima Harbour, 8 fathoms, sandy mud and broken shells.

42. *Mitra (Costellaria) Collinsoni*, A. Ad. Journ. Linnean Soc. 1864, vii. p. 200.

*Hab.* Ooshima Harbour, 8 fathoms; Matoza Harbour, 6 fathoms.

The dimensions of this species are, length 18 mill., diam. 6. I give these measurements, as they are omitted by Mr. A. Adams, whose practice it nearly always is to pass them over as of no importance.

43. *Cancellaria Spengleriana*, Desh.; Conch. Icon. x. f. 11; Kiener, Coq. Viv. pl. iv. f. 1.

*Hab.* Japan, lat.  $35^{\circ} 7' N.$ , long.  $136^{\circ} 55' E.$ , 3 fathoms; soft mud.

*Ann. & Mag. N. Hist.* Ser. 4. Vol. xv. 30

44. *Admete ovata*, sp. nov.

Testa ovata, tenuis, semipellucida cæruleo-alba; anfractus 4-5 convexi, supremi 2-3 erosi, penultimus longitudinaliter oblique plicatus, plicis superne suturam non attingentibus et spiraliter striatus, ultimus maximus, subglobosus, striis spiralibus circiter 20 insculptus; apertura ovata, longitudinis totius  $\frac{8}{13}$  adæquans; columella arcuata, callo tenuissimo induta, basi oblique truncata.

Long.  $6\frac{1}{2}$  mill., diam.  $3\frac{1}{2}$ ; apertura long. 4 mill., diam. 2.

*Hab.* Lat.  $42^{\circ} 52'$  N., long.  $144^{\circ} 40'$  E., 48 fathoms, sand and mud; temperature at bottom  $37^{\circ}$ - $39^{\circ}$ .

This species is peculiar for its ovate form and very short spire. Only the penultimate whorl appears to be plicated.

45. *Admete globularis*, sp. nov.

Testa parva globularis, tenuis, nivea; anfractus  $4\frac{1}{2}$ , primi tres parvi convexiusculi sutura leviter canaliculata sejuncti, ultimus globosus magnus, omnes spiraliter tenuissime sulcati, apertura aliquanto magna, subpyriformis, longitudinis totius fere  $\frac{3}{4}$  æquans; columella callo tenui lato supra anfractum producto amicta, versus basim oblique truncata; labrum tenue, simplex.

Long. 4 mill., diam. anfract. ultimi 2.

*Hab.* Lat.  $42^{\circ} 52'$  N., long.  $144^{\circ} 40'$  E., at a depth of 48 fathoms, on a sandy bottom, with a temperature of  $37^{\circ}$ - $39^{\circ}$ .

This is a very remarkable species, and unlike any shell which has ever come to my notice, and probably may eventually be placed in a distinct genus. It is in form very much like *Cassissaburon*; and the truncature of the columella resembles that of *Verena crenocarina* in the Melaniadæ, or of the genus *Achatina* among the Pulmonata. The thin callous deposit extends from the juncture of the labrum with the body-whorl to the end of the columellar truncation, and spreads out some distance over the whorl.

46. *Oliva (Porphyria) mustelina*, Lamk.; Conch. Icon. vi. f. 23.

*Hab.* East of Nippon, 3 fathoms, soft mud.

47. *Olivella fulgurata*, Adams & Reeve.

*Oliva fulgurata*, Adams & Reeve, Voy. Samarang. pl. x. f. 12.

*Oliva Fortunei*, A. Adams, MS. in Coll. Cuming.

*Hab.* Yamada Harbour, lat.  $39^{\circ} 32'$  N., long.  $141^{\circ} 53'$  E., in 7 fathoms, bottom sand and broken shells.

The Japanese specimens are of a pale horny colour, variegated with undulating chestnut markings.

48. *Natica janthostoma*, Deshayes, Mag. de Zool. 1841, pl. 45 ;  
Conch. Icon. ix. f. 79a, b.

*Hab.* Nemero, East Yesso.

Three young specimens are rather differently coloured from the typical form. The chief colour of the body-whorl is a pale yellow, which is interrupted by two broad brown spiral bands.

49. *Natica Colliei*, Récluz ; Reeve, Conch. Icon. ix. f. 112a, b.

*Natica concinna*, Dunker, Malak. Bl. 1860, p. 232 ; Moll. Japonica, p. 14,  
pl. ii. f. 21.

*Hab.* Matoza Harbour, 6 fathoms, sand.

*N. concinna*, Dunker, is undoubtedly the same as *N. Colliei*, Récluz, his description agreeing in every particular with the latter species.

The operculum is calcareous, and externally deeply and spirally sulcated, as in *N. millepunctata*, Lamk.

50. *Obeliscus pulchellus*, A. Ad. Thes. Conch. ii. p. 808,  
pl. 171. f. 20.

*Hab.* Goza Harbour, 6 fathoms, sandy mud.

51. *Syrnola cinctella*, A. Ad. Ann. & Mag. Nat. Hist.  
1860, vi. p. 333.

*Hab.* Matoza Harbour, 6 fathoms, sand.

52. *Solidula strigosa*, Gould, Otia Conchol. p. 114, as  
*Buccinulus*.

*Hab.* Gozo Harbour, 6 fathoms, sandy mud.

[To be continued.]

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LIII.—*Notes on Carboniferous Lamellibranchiata.*

By R. ETHERIDGE, jun., F.G.S.

[Plate XX.]

Genus MYALINA, De Koninck,

Descr. Animaux Foss. Terr. Carb. Belgique, p. 125.

(Redefined by McCoy, Brit. Pal. Foss. p. 491.)

*Myalina crassa*, Fleming.

*Modiolus*, sp., Fleming, Edinb. Phil. Journ. 1825, xii. p. 246 (without description).

*Mytilus crassus*, Fleming, British Animals, 1828, p. 412.